Washington State Department of Transportation

Discipline Report Checklist
Hazardous Materials

Project Name:_____ Job Number:_____

Contact Name: _____

Date Received: _____ Date Reviewed: _____ Reviewer: _____

Discipline reports are prepared in accordance with **Section 447** of the Environmental Procedures Manual (EPM) for all projects that require an Environmental Impact Statement (EIS). Discipline reports are the formal reports generated by the individual expert, detailing potential impacts resulting from a project alternative. In general, the report defines the environment, predicts and analyzes potential impacts of project implementation, helps identify the least environmentally damaging alternative, proposes mitigation options for unavoidable impacts, and provides information to other planners interested in the subject areas. The magnitude of a project may dictate the number and type of discipline reports developed for an EIS. Discipline studies supporting Environmental Assessments (EAs) must consider the same breadth of information, although the report will normally be considerably less complex. Information may be combined, if warranted by the amount of data collected.

This document is intended to supplement information presented in **Section 447** by providing a checklist of specific elements that should be included or considered in a hazardous material discipline report. All discipline reports should follow a similar format so the information can be easily incorporated into the EIS. A hazardous material discipline report should include a title page, table of contents, list of acronyms, executive summary, report body, conclusion, bibliography, and appendices. The body of the report should have the following sections:

1. Executive Summary
2. Introduction
3. Studies and Coordination
4. Affected Environment
5. Potential Impacts
6. Mitigation

The following checklist identifies specific elements that should be considered in these sections. Each element on the checklist should be addressed to the extent that information is available; when information is brief, subject areas may be combined. The extent to which these elements are included in the discipline report is also dependent on the complexity and magnitude of the proposed project.

1.0 EXECUTIVE SUMMARY

The discipline report should include a brief executive summery that presents the purpose of the report, an overview of the findings and a conclusion that identifies recommended measures based on those findings. Recommended contents of an executive summary are as follows:

- *Purpose of the report*
- *Identify overall location & study area*
- *Identify the focus of the analysis and the screening process*
- *Identify the total number of sites included in the screening process and the number of sites that required detailed analysis*
- *List the sites that required detailed analysis and in one sentence identify the property's business operations and the potential environmental concern*
- *Summarize the results of the detailed analysis for those sites that were identified as substantially contaminated properties*
- *Summarize impacts to any environmental media*
- *Identify any estimated costs or mitigation measures*

2.0 INTRODUCTION

The discipline report should provide a general description of the project alternatives, define the discipline report study units, and describe the information gathering methodology used for the report.

❑ **2.1 Project Description:** Identify the project purpose, goals, and needs.

❑ 2.1.1 Describe the build alternatives.

❑ 2.1.1 (a) Describe any project segmentation developed for analysis in the EIS.

❑ **2.2 Mainline Description:** Describe overall study area/boundaries, relate to type of land use.

❑ **2.3 Interchange Description(s):** Develop study area segments.

❑ 2.3.1 Define the study boundaries; consider how well defined the alignments are.

❑ 2.3.2 Define the study area segments, relate to type of land use where possible.

❑ 2.3.2 (a) Coordinate study area segments with project segments, for ease of analysis.

❑ 2.3.2 (b) Discuss observations of visual / windshield surveys of the study area segments.

❑ **2.4 Discipline Study Overview:** Provide an overview of the discipline study.

❑ 2.4.1 Describe types of sites that require consideration.

❑ 2.4.2 Identify the goals of the study.

❑ 2.4.3 Explain the organization of the study; include tables, figures and appendixes.

3.0 STUDIES AND COORDINATION

This section details the research actually performed. It describes all the resources used to identify potentially contaminated properties within a one-mile radius of the project footprint. All known or suspected contaminated sites should be mapped and summarized on lists. Final listings and maps should be validated for accuracy through additional research, site visits, and interviews. This section is designed to identify and list sites that may affect the study area; detailed discussion of each site is contained in 3.0, Affected Environment.

❑ **3.1 Study Methodology:** Provide an overview of the sequential tasks performed to identify potentially contaminated properties located within a one-mile radius of the project footprint.

❑ **3.2 Regulatory Database Review:** Conduct a regulatory review or update project-scoping lists. Please note that the sources listed below are not inclusive of all possible databases (e.g., Toxics Release Inventory (TRI), WA Independent Cleanup Report (ICR).

❑ 3.2.1 Identify federal sources used.

❑ 3.2.1 (a) Identify sites on the National Priority List (NPL).

❑ 3.2.1 (b) Identify sites on the Superfund Program Comprehensive Environmental Response, Compensation and Liability Act Information System (CERCLIS).

❑ 3.2.1 (c) Identify sites on the Resource, Conservation and Recovery Act Information System (RCRIS).

❑ 3.2.2 Identify Washington State sources used.

❑ 3.2.2 (a) Identify sites on the Confirmed and Suspected Contaminated Sites List (CSCS).

❑ 3.2.2 (b) Identify sites on the Hazardous Site List (HSL).

❑ 3.2.2 (c) Identify sites on the listing of registered Underground Storage Tanks (UST).

❑ 3.2.2 (d) Identify sites on the listing of Leaking Underground Storage Tanks (LUST).

❑ 3.2.2 (e) Identify sites on the Model Toxics Control Act (MTCA), Toxics Cleanup Program Site Register.

❑ 3.2.3 Identify regional, local, and municipal sources used.

❑ 3.2.4 Document the regulatory review.

❑ 3.2.4 (a) Provide a listing of sites identified during the regulatory review.

❑ 3.2.4 (b) Provide a comprehensive map of site locations within the study areas.

❑ **3.3 Historical Research:** Conduct a historical review.

❑ 3.3.1 Identify historical sources used.

❑ 3.3.1 (a) Review aerial photography; i.e., WSDOT Geographical Services.

❑ 3.3.1 (b) Review business or land use directories; i.e., Polk Directories.

❑ 3.3.1 (c) Review historical or land use maps; i.e., Metsker, Kroll, city/county.

❑ 3.3.1 (d) Review Sanborn Fire Insurance Maps, where available.

❑ 3.3.1 (e) Review special collections in museums and historical societies.

❑ 3.3.1 (f) Review municipal tax, zoning, and growth management records.

❑ 3.3.2 Document the historical review.

❑ 3.3.2 (a) Compile a listing of sites identified during the historical review.

❑ 3.3.2 (b) Provide a comprehensive map of site locations within the study areas.

❑ **3.4 Data Validation:** Validate study area project lists of known or suspected contaminated sites.

❑ 3.4.1 Review regulatory agency enforcement/notification files.

❑ 3.4.2 Conduct a detailed site visit.

❑ 3.4.2 (a) Locate all sites.

❑ 3.4.2 (b) Look for evidence of poor housekeeping, contamination, and/or cleanup activity.

❑ 3.4.2 (c) Identify other sites with contamination potential not previously identified.

❑ 3.4.3 Conduct interviews with business owners, local government representatives, and long-time residents, especially concerning historical activities.

❑ 3.4.4 Eliminate sites that do not pose a potential hazard or problem for the project and re-compile the listing of sites and the maps (i.e., the site is down gradient from the project footprint, etc.)

❑ 3.4.5 Document the validation process used throughout Section 2.4.

❑ **3.5 Site Screening Summary:** Summarize all data and activities obtained from the studies and reviews described above.

❑ 3.5.1 Identify sites that are “Substantially Contaminated.” [EPM, Section 447.05(3)(b)]

❑ 3.5.2 Identify sites that are “Reasonably Predictable.” [EPM, Section 447.05(3)(b)]

4.0 AFFECTED ENVIRONMENT

The discipline report should provide a characterization of the affected environment as affected by known or suspected contaminated sites. The characterization should include a discussion of the land use history and the physical environment considerations that may affect the distribution, migration, and cleanup of contamination. Unlike "Studies and Coordination," this part of the report identifies the specific contaminants for each site of concern, and provides an assessment of the relative importance of the known or suspected contamination impacts to the overall project.

❑ **4.1 Historical Overview:** Provide a discussion of the study area land use, including:

❑ 4.1.1 Changes and evolution of land use over time.

❑ 4.1.2 The mix, density, and relative importance of land uses in the study areas.

❑ 4.1.3 Types of contamination associated with the various land uses and a discussion of the problems or issues associated with cleaning up such contaminants.

❑ **4.2 Physical Environment:** Provide a discussion of the physical environment, including:

❑ 4.2.1 The local or regional topography and how it impacts distribution and migration of contaminants.

❑ 4.2.2 Soils, fill, or subsurface conditions in the area and how they impact distribution and migration of contaminants.

❑ 4.2.3 Ground and surface water conditions in the area and how they impact distribution and migration of contaminants.

❑ **4.3 Site Specific Environmental Concerns:** Develop a study area summary of the known and suspected contaminated properties.

❑ 4.3.1 Identify each site in some logical review order.

- *Recommendation: Organize by Substantially Contaminated Properties and Reasonably Predictable Properties.*

❑ 4.3.2 Identify the contaminants known or suspected for each site.

❑ 4.3.3 Discuss results of investigation records in the public domain.

5.0 POTENTIAL IMPACTS

The discipline report should discuss the potential impacts that 1) the known and suspected contamination has on project development, and 2) the project may have on the affected environment. This assessment should consider the general scope of project involvement, recommendations and scope of further investigation, construction impacts, and regulatory impacts. A cost impact based on the level of investigation or cleanup projections should also be included.

❑ **5.1 Project Involvement Summary:**

❑ 5.1.1 Describe the potential extent of property acquisition requirements and the projected timing requirements.

❑ 5.1.2 Describe potential excavation and dewatering requirements for the project.

❑ **5.2 Potential Project Impacts:** Evaluate impacts for each alternative for the overall project, including:

❑ 5.2.1 Cleanup Liability: Discuss immediate or long-term liability issues associated with acquisition and/or construction of property with contaminated environmental media (i.e., soil, ground/surface water, air).

Additional Considerations:

- *Abandoned drums/containers*
- *Asbestos Containing Materials (ACM) and Lead Based Paint (LBP)*
- *Hazardous material spills*
- *Materials used on-site*
- *Underground Storage Tanks (UST)*
- *Underground utilities*
- *Unknown/known contaminated soil, groundwater, surface water & vapors*

❑ 5.2.2 Worker Safety and Public Health: Discuss related environmental issues that may arise during construction.

For Example:

- *Bird guano*
- *Ruptured pipeline*
- *Training requirements*
- *Additional safety and health issues identified in section 4.2.1 above*

❑ 5.2.3 Construction impacts and affected environmental media including:

❑ 5.2.3 (a) Media specific impacts (i.e., soil, ground/surface water, & air)

❑ 5.2.3 (b) Time requirements for cleanup activities during construction.

❑ 5.2.3 (c) Likelihood of encountering unknown contamination.

❑ 5.2.3 (d) Potential for construction activities creating or modifying contaminant migration pathways.

❑ 5.2.3 (e) Potential for construction-related releases of hazardous materials.

❑ 5.2.3 (f) Enforcement Orders on known contaminated sites.

❑ 5.2.4 Discuss other impact considerations as appropriate considering the specific project.

❑ **5.3 Secondary Impacts:** Describe secondary impacts that are "caused by an action and are later in time or farther removed in distance but are reasonably foreseeable." [EPM, Section 480]

❑ **5.4 Cumulative Impacts:** Describe cumulative impacts that "result from incremental consequences of an action when added to other past and reasonably foreseeable future actions." Identify active or proposed actions in the project area that may be affected. [EPM, Section 480]

❑ **5.5 Operational Impacts:** Describe operational impacts that result from the normal operation of the completed project.

❑ **5.6 Potential Regulatory Considerations:** Summarize the federal, state, and local laws and regulations expected to impact the management of hazardous material issues on the project, such as

- *General Occupational Health Standards (WAC 296-62)*
- *Model Toxics Control Act (MTCA)/Superfund*
- *National Pollution Discharge Elimination System (NPDES)*
- *Solid (Non-Dangerous) Waste Disposal*
- *State Dangerous Waste*

❑ **5.7 Recommendations for Further Investigation**

❑ 5.7.1 Identify study data gaps or other unknowns.

❑ 5.7.2 Identify specific sites for which a full-access Site Reconnaissance is recommended.

❑ 5.7.3 Identify specific sites for which a Preliminary Site Investigation (Phase II Environmental Site Assessment) is recommended.

❑ 5.7.4 Identify additional investigations that are recommended for sites that have been previously investigated.

❑ 5.7.5 Identify specific sites for which an ACM/LBP survey is recommended.

❑ **5.8 Cost Estimates for Further Investigations:** Evaluate potential cost impacts.

❑ 5.8.1 Develop cost estimates for site reconnaissance activities.

❑ 5.8.2 Develop cost estimates for Preliminary Site Investigations.

❑ 5.8.3 If necessary, develop cost estimates for Detailed Site Investigations.

6.0 MITIGATION

This section of the discipline report should focus on mitigation measures relevant to all potential impacts identified under the previous section 4.0, Potential Impacts. The Mitigation section presents the costs and associated measures that should be considered to avoid, minimize, or control and manage environmental issues as well as the appropriate cleanup methods for the identified impacts. Mitigation measures should be site specific where possible.

❑ **6.1 General:** Identify general factors for overall project mitigation measures, including:

For Example:

- *Results of pre-acquisition site investigations should be used to assign fair market property values that consider potential long-term cleanup costs.*
- *Discuss applicable ROW acquisition options that avoid sites, create cost sharing or cost recovery options, or change regulatory impacts to the sites.*

❑ **6.2 Cleanup Liability:** Discuss mitigation options that would avoid or minimize liability issues identified in sections 4.2.1. Specifically include:

❑ 6.2.1 (a) Mitigation options for potentially impacted environmental media (soil, ground/surface water, air), such as:

- *Performance Bonds*
- *Indemnifications*
- *Other Agreements*

❑ 6.2.1 (b) Methods that avoid creating, spreading, containing and removing contamination, such as:

- *Spill Prevention Control and Countermeasures Plan (SPCC)*
- *ACM and LBP Survey*
- *Erosion sediment control planning*
- *Special construction needs for permitting, spill avoidance, etc., when working over water and near or in other sensitive areas*
- *UST Decommissioning*
- *Utility Survey*

❑ **6.3 Worker Safety & Public Health:** Discuss mitigation options that would improve worker safety & public health considerations identified in section 4.2.2, such as:

- *Personal Protective Equipment (PPE)*
- *Material Safety Data Sheets (MSDS)*
- *Site Security Measures (i.e., fences, barricades & lighting)*

❑ **6.4 Construction Impacts:** Discuss mitigation options that avoid, minimize or manage the potential construction impacts and affected environmental media identified in section 4.2.3, such as Spill Prevention Control and Countermeasure (SPCC) Plans and Erosion and Sedimentation Control (ESC) Plans.

❑ **6.5 Cumulative Impacts:** Identify mitigation options for cumulative impacts.

❑ **6.6 Secondary Impacts:** Identify mitigation options for secondary impacts.

❑ **6.7 Operational Impacts:** Identify mitigation options for operational Impacts.

❑ **6.8 Potential Regulatory Considerations:** Identify regulatory mitigation options for federal, state, and local laws and regulations expected to impact the management of hazardous material issues on the project as identified in Section 4.6. (For example, early coordination with regulatory agencies.)

❑ **6.9 Preliminary Mitigation Cost Estimates:** Estimate preliminary costs for WSDOT mitigation activities.

❑ 6.9.1 Where possible with limited information, develop preliminary cost estimates for cleanup of contaminated soil/water management activities. Estimates may be expressed as cost ranges.

For Example:

- *Spill Prevention Control and Countermeasure Plan*
- *Asbestos Containing Materials and Lead Based Paint*
- *Abandoned/Unknown Materials*
- *UST Decommissioning*
- *Worker/Public Health and Safety*

❑ 5.9.2 Estimates for long-term liability (e.g., monitoring costs).

7.0 Limitations and Signatures

8.0 References

❑ **8.1 Research Documents:** Identify the source of any articles, journals, publications, and/or websites used for the Discipline Study.

❑ **8.2 Written:** Identify names, titles, agency (or company) and date of documents transmitting written communication.

❑ **8.3 Verbal:** Identify names, titles, agency (or company) and date of persons providing personal/verbal communication.

9.0 Recommended Appendices, Figures & Photos

❑ **9.1 Appendices**

❑ 9.1.1 Attach research results that may have been done by companies contracted for Regulatory Database Review, Historical Research or Validation Studies.

❑ 9.1.1 (a) Attach map depicting site locations of identified known or suspected contaminated sites.

❑ 9.1.1 (b) Attach a list of sites identified as sites that may affect the environment and project construction.

❑ 9.1.1.b.1 Identify the site name, ID number, address, and rational for listing the site.

❑ 9.1.1.b.2 Identify whether the site received a detailed analysis.

❑ 9.1.2 Attach Ecology's Notification of Dangerous Waste Activities Introduction and Form 2.

❑ 9.1.3 Attach an Example of a Soil Disposal Specification.

❑ 9.1.4 Attach the Standard Specification 1-07.15(1) for Spill Prevention, Control and Countermeasures Plan.

❑ 9.1.5 Attach an example of an Asbestos/Lead Abatement Specification.

❑ 9.1.6 Attach other brief guidance as appropriate.

❑ **9.2 Figures**

❑ 9.2.1 Develop vicinity maps for the project area.

❑ 9.2.1 (a) Identify project location.

❑ 9.2.1 (b) Outline project boundaries and study area segments.

❑ 9.2.2 Develop site-specific maps.

❑ 9.2.2 (a) Incorporate project alternatives and proposed right-of-ways.

❑ 9.2.2 (b) Identify significant geographic features.

❑ 9.2.2 (c) Identify appropriate property boundaries where possible.

❑ **9.3 Site Photographs**

❑ 9.3.1 Include photographs with captions for specific sites of concern identified under section 3.3.1.